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ACER GRANDIDENTATUM (SAPINDACEAE) IN MONTANA

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ABSTRACT

Bigtooth maple (*Acer grandidentatum*) has long been mentioned as occurring in Montana, but based upon lack of adequate documentation. Some recent works have not included the species as part of the flora of the state. The recent collection of several specimens of this maple in Gallatin County documents the species in the state. A brief history of later floristic studies that comment on the species within the state and a general description of the occurrence site are included. The overall distribution of the species is discussed, with added emphasis on Oklahoma and Washington. A photograph of the documenting herbarium specimen from Montana is included.

KEY WORDS: *Acer*, Sapindaceae, Montana, Oklahoma, Washington.

Acer grandidentatum ranges from Sonora, Chihuahua, and Coahuila in northern Mexico, then Texas, New Mexico, and Arizona northward through Utah, Colorado, Wyoming, and Idaho (Little 1976). The range given by USDA, NRCS (2013) also includes Nevada, Washington and Montana. Little (1976) included Oklahoma as part of the distribution but USDA, NRCS (2013) does not include it. The present report discusses documentation, or lack of it, for Montana, Oklahoma, and Washington.

Citation of the occurrence of *Acer grandidentatum* in Montana is apparently based upon a loose application of the name with respect to the present political boundaries of that state. This was documented by Blankinship (1905), who noted this: "Described from a specimen collected by [Thomas] Nuttall on 'Bear River of Timpanagos' in southwestern Wyoming or southeastern Idaho—'not N. Montana,'… so all references of the species to Montana are in error" (for an image of Nuttall's type, see Starr Virtual Herbarium: <http://sciweb.nybg.org/science>). The species is attributed to Montana in USDA NRCS (2013), evidently based on Dorn (1984), a record not recognized by Mincemoyer (2012). The record is only mentioned in Lesica (2012), with the qualification "I have seen no specimens," and is not included in the treatment of the genus.

BAYLU
Baylor University
Waco, Texas
0 cm 1 2 3 4 5
Flora of Montana
Acer grandidentatum
Gallitan County: 1.7 mi. north of jct. of Hegben Lake Rd. and Hwy 191 too Grayling Creek. At Grayling Creek crossing, head upstream on east side of creek 0.2 miles.
J. Singhurst 19336

Figure 1. *Acer grandidentatum* from Gallatin, Co., Montana (*Singhurst 19336*, BAYLU). Photo by Walter C. Holmes

Recent field collecting by the senior author in southwestern Montana has resulted in the collection of *Acer grandidentatum*, which we here report as documentation of its occurrence in the state. This collection represents the northernmost extension of the range of the species and is continuous with the distribution southward in Idaho and Wyoming.

Voucher. **MONTANA**. Gallatin Co.: Madison Mountains, moderately sloping stream terrace 1.7 mi N of jct of Hegben Lake Rd. and Hwy 191 to Grayling Creek, at Grayling Creek crossing, upstream 0.2 mi on E side of creek, 44° 48' 13.49" N, 111° 6' 23.01" W, 2051 m (6730 feet), 15 Aug 2013, *Singhurst 19336* (BAYLU).

The overstory of the Grayling Creek site is dominated by narrowleaf cottonwood (*Populus angustifolia*) with an occasional box elder (*Acer negundo*) interspersed. Approximately 40 maple trees of *Acer grandidentatum* are scattered among the narrowleaf cottonwood and the maple crowns form a lower (subdominant) open canopy layer. Mountain snowberry (*Symphoricarpos oreophilus*) and creeping barberry (*Mahonia repens*) are the dominant woody plants in the shrub layer. The forb layer consists mainly of lily of the valley (*Maianthemum stellatum*). The uniform nature of the area suggests that additional stands of the maple may occur along Grayling Creek and other nearby streams, and further investigation of the Grayling Creek area is warranted.

Acer grandidentatum in Oklahoma and Washington

Little (1976) mapped *Acer grandidentatum* in the Wichita Mountains of Comanche County of southwest Oklahoma. In his *Forest Trees of Oklahoma*, Little (2002) identified these maples as sugar maple (*A. saccharum* Marsh.). The Oklahoma Vascular Plant Database (2013) also uses the name *A. saccharum* for these maples. Thus there is no basis for considering *A. grandidentatum* to be a member of the Oklahoma flora.

Acer grandidentatum is cited by USDA NRCS (2013) as occurring in Washington state. Apparently, this is based upon Creso (1984), who noted in the Addenda (p. 520) that "the following species were omitted from the text due to (1) an oversight, or (2) being of higher elevations or rare so as to be unlikely to be observed. … ." "*Acer grandidentatum* (rare in W. Wa.)" is included under "Other elevations:" with no further comment. Western Washington in Creso's flora is defined as "roughly from the Cascade summits to the ocean and from its northern to southern boundaries." At a minimum the Washington locations (including the ones cited immediately below) would be 475–525 miles or more west and nearly 200 miles north of the Gallatin County record reported above. The Creso record (1984) is not documented by a specimen citation.

Three specimens of *Acer grandidentatum* are cited in PNW Plants (2013), two of which (Pacific Lutheran University (PLU) 3016 from Jefferson County and (PLU) 3015 from King County) are accompanied by digital photographs of the specimens. These are referable to *Acer glabrum*. The third specimen is from Seattle, King County (University of Washington (WTU) "collected for biology 317" leg. ign.) is not accompanied by a photo but is stated on the label to be introduced. As such it does not constitute documentation of the species as part of the naturalized state flora.

Except for its presence in Montana, the known distribution of *Acer grandidentatum* clearly corresponds with the distribution of the species as presented in BONAP (2011). Additionally, we are following the disposition of the species as treated by Turner et al. (2003) and BONAP (2011), i.e., recognition of the specific name only. The variety *Acer grandidentatum* var. *sinuosum* is characterized by having the leaf divided into three large usually entire lobes (Correll & Johnston 1970). Although *Singhurst 19336* meets the criteria of the variety, the intent of this paper is to report the species in Montana and not to assess the taxonomy of the species as a whole.

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